What factors influence Hong Kong school students in their choice of a career in nursing?

W. Law, D. Arthur*

The Department of Nursing and Health Sciences, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong

Received 4 April 2001; received in revised form 22 April 2002; accepted 29 April 2002

Abstract

Chronic and recurrent shortages of nurses, coupled with the increasing demand for high quality and motivated nurses and competition for secondary school leavers from other professions, are issues which prompted this investigation of senior school students’ career choice.

Using a descriptive survey design, and a questionnaire developed for the study, 1246 Form 6 students in Hong Kong were surveyed, of these 28% respondents reported that they were interested in studying nursing. The findings indicated that students’ decision to choose or not choose nursing was significantly influenced by the demographic factors: gender ($\chi^2 = 42.72, p < 0.0005$), biology subject pursued ($\chi^2 = 18.94, p < 0.0005$), previous academic achievement ($\chi^2 = 34.33, p < 0.0005$) and mother’s occupation ($\chi^2 = 21.08, p = 0.012$); and their perception of nursing as a career score ($t = 14.21, df = 1237, p < 0.0005$). Students’ intention to study nursing was also significantly affected by social influence: parents ($\chi^2 = 11.53, p = 0.001$), school career masters ($\chi^2 = 5.52, p = 0.019$) and friends ($\chi^2 = 4.83, p = 0.028$); past experience with career activities ($\chi^2 = 84.479, p < 0.005$); and working in hospital ($\chi^2 = 31.742, p < 0.005$). Backward elimination logistic regression analysis concluded that being female ($p < 0.0005$), biology study at Form 5 and A-level ($p < 0.0005$), total perception scores ($p < 0.0005$), and participation in career activities ($p < 0.0005$) were found to be predictors of the students’ intention to study nursing.

Results of this study can be used by nurse leaders and recruiters to develop strategies and help school leavers perceive nursing in a more positive way. Expanding the informational sources about nursing can facilitate the recruitment process.

© 2002 Elsevier Science Ltd. All rights reserved.

1. Introduction

Recruitment and retention of nursing students are critical issues in contemporary nursing education. These are issues that are neither well researched nor addressed. With the increasing expectation on health care provision; increasing population size and aging population; the greater demand for high quality and motivated nurses and great competition for secondary school leavers from other professions, the need to attract good quality students into the nursing profession is essential.

Until recently Hong Kong had a dual system where the majority of nurse education was conducted in hospital schools of nursing and smaller numbers in universities. In 2000, the hospital authority decided to close all hospital schools of nursing and allow universities to conduct undergraduate nurse education. As universities begin to think seriously about recruiting students and how to attract quality applicants for a changing health care system (Health and Welfare Bureau, 2000), active steps must be taken to specify the variables that attract school leavers into nursing.

Hong Kong is in a state of flux. Its economy is struggling, its health care system is under review, the nursing education system is in mid-change and the reality of being part of China while having strong links...
with the West, is presenting a challenge to nurse educators. In the absence of previous studies this paper adds some insights into what influences school students decisions in culturally unique Hong Kong. This paper aims to answer some questions and help guide the identification and implementation of strategies to recruit and retain well-qualified high-motivated people into the nursing profession in Hong Kong. While the focus is on Hong Kong, where health care reform and nurse education are undergoing change, many of the issues are relevant for nurses worldwide.

2. Literature review

A comprehensive literature review revealed that while some material has been published about career choice in allied health care professions, and several articles have been written about nursing as a career, there were no studies related to the Hong Kong situation. The following literature that related to why high school students choose or do not choose nursing as a career suggests that what motivates an individual to choose a career is influenced by a multitude of factors. Three important themes emerged. They were socio-demographic factors, students’ perceptions of nursing as a career and factors influencing students’ career choice.

3. Socio-demographic factors

The decision to choose nursing as a career was found to be significantly influenced by demographic characteristics in several studies where there were significant differences found in demographic groups for positive attitudes and interest in nursing as a career (Barkley and Kohler, 1992; Boughn, 1994; Lerner, 1991; May et al., 1991; Tang et al., 1998; Williams et al., 1991).

3.1. Gender

The male–female balance of enrollments in many professional and occupational education programs has changed noticeably over recent years. During this time, nursing has remained a highly female dominated profession, and men constituted a very small percentage of the nursing work force. Some authors suggest that more females than males have been employed in the nursing discipline because females have a more positive attitude toward nursing (May et al., 1991; Tang et al., 1998; Williams et al., 1991).

3.2. Parents’ education level and occupation

In a cross-sectional study conducted among Dade County senior high school students (Grossman and Northrop, 1993), it was found that the occupations of students’ mothers had a more significant impact on their choice of career than the occupations of their fathers.

The variable of parents’ education was identified in the study of May et al. (1991) where it was found to be a significant dependent variable when using a scale for measuring attitudes toward nursing as a career. Ratings for nursing were summed so that a higher score indicated a more positive attitude toward nursing and a lower score indicated a more negative attitude. The results showed that adults with high school education or less had significantly more positive attitudes toward nursing than those with a bachelor degree.

In the study of Lerner (1991), who conducted a statewide survey of 2315 RNs taking the state licensure examination, an attempt was made to identify the major reasons for selecting a nursing career. The constructed questionnaire elicited data pertaining to the RNs’ demographics, educational and employment characteristics as well as their subjective perceptions of work and the profession. With a 97% response rate, it was noted that 60% of the RN’s mothers and 50% of their fathers had more than a high school diploma. From the study it could be assumed that as the education level of the parent increases, the students’ interest in a nursing career increases.

3.3. Family income

From the aforementioned study of May et al. (1991), it was also found that family income also made a difference; those who were in the higher economic levels were significantly more negative in attitude than those in the lower economic levels.

Conversely, Tang et al. (1998), reported that annual parental income was found to be a predictor of the intention to study nursing among students. Respondents who perceived their parents’ annual income falling into the middle income group were more than three times more likely to study nursing than those who perceived their parents’ annual income falling into the lower income group.

4. Perceptions of nursing as a career

Perceptions of nursing as a career are thought to be related to choices made by high school students when entering into the nursing profession (Steven and Walker, 1993), and the decision to choose or not choose nursing was significantly influenced by the congruence between students’ perception of an ideal career and nursing as a career (Reiskin and Haussler, 1994). Considering the nursing career, Boughn (1994) researched the motivation of male nurses choosing nursing as career and found that there were three important concepts: (1)
psychosocial motivation as defined as the desire to care for others; (2) practical motivation, specifically as related to job security and salary; and (3) feelings of power and empowerment.

4.1. Psychosocial attributes

Students choose nursing as a career for a variety of reasons. There are several studies which identified the need to help others, and other humanitarian factors to be important factors in nursing career choice. The results of these studies showed a majority of subjects continue to identify nursing as caring (Kersten et al., 1991; Barkley and Kohler, 1992; Grossman and Northrop, 1993; Reiskin and Haussler, 1994; Steven and Walker, 1993; Williams et al., 1991). Caring comments included responses such as helping, giving care and comfort, nurturing, serving, supporting and sharing.

In the study of Grossman and Northrop (1993), 503 senior high school students’ perceptions of nursing as a career were studied. The researchers reported that although only 7% of them listed nursing as their desired occupation, the majority of students (74%) in the study perceived nursing as a career that provided opportunities to care for individuals, families, and communities in time of need and help them live healthy lives.

Survey results from a relatively small sample of male high school students (n = 126) indicated an overall positive perception of the image of nurses and the profession (Barkley and Kohler, 1992). Nursing’s caring, nurturing role appears to be well identified in that 91% of subjects rejected the idea that nurses were mean and do not care, and 78% believed nurses were kind and compassionate people. However, the results showed that almost 90% of the respondents were not contemplating nursing as their career.

Stevens and Walker’s study (1993), used a descriptive design with 641 high school students and attempted to determine why nursing was not selected more frequently as a career. The results showed that willingness to work with sick people and help people were the highest ratings for choosing nursing as a career.

The above studies, revealed that caring for sick people was a positive attitude held by the majority of student nurses, senior and junior high school students and this attribute was a major reason they chose nursing as a career. However, there was also a negative attitude held by the students towards the perception of nursing which included working in the hospital performing unpleasant tasks, and working irregular times, including weekends and holidays.

4.2. Socio-economic attributes

Similar findings were discussed in the study of Williams et al. (1997) where open-ended questions asked the reasons for choosing nursing, and the most frequently cited reason was job opportunity/security. Those nursing students in the study were likely to choose nursing because of a desire for a profession with job security where they could work with people and capitalize on their interest in science. In another study, the cost of training was perceived as the strongest barrier to attainment of careers in health professions (Thomson et al., 1992).

From these studies, it was found that perceived high salary and job opportunities were positive attitudes that would significantly influence students’ career choice. On the other hand, high educational cost of university baccalaureate nursing programs compared with hospital based nursing programs could be a negative belief held by students towards nursing.

4.3. Interest in science

An interest in science was listed as a reason students choose to go into nursing. Students in science felt they would succeed in their education, as well as in their day-to-day activities as a nurse (Kersten et al., 1991; Williams et al., 1991). However, in the study of Thomson et al. (1992) the high school students indicated that they were concerned with academic challenges associated with health career education. When they were asked to rate 13 potential barriers to their pursuits of careers in health professions, the difficulty of science subjects in the course remained the factor perceived as one of the strongest barriers to their attainment of careers in the health professions.

4.4. Competitive achievement attributes

Kohler and Edwards (1990) investigated 306 high school students’ beliefs about nurses and nursing. Using a self-designed questionnaire, subjects responded to statements about educational requirements for registered nurses along with their working conditions, earning power, and social status. Result showed that almost 30% of the subjects believed nursing to be a low status occupation. The same percentage of subjects believed the status of nurses was equal to that of physicians. Lawyers were perceived as having a higher status than nurses by a larger majority of high school students surveyed.

Other influencing factors:

4.5. Who influenced students’ career choice?

Advice from family, friends, school career masters and nurses, interaction with nurses in practice, interaction with sick people and interaction with students already enrolled in a nursing education program were found to be common major influencing agents for a
student’s image of the nursing profession and career choice of nursing (Grossman and Northrop, 1993; Kersten et al., 1991; Rawlins et al., 1991; Williams et al., 1991; Smadu, 1996).

4.6. The influence of nurses

A significant relationship was found between students having a role model who was a nurse and consideration of nursing as a career. (Grossman et al., 1989; Hendrickx and Finke, 1994) The study of Kersten et al. (1991) on 752 student nurses found that nurses were major influencing agents for a student’s image of the nursing profession and hence making their career choice (40%). The other four top categories were family, self, friends and physician.

4.7. The influence of mass media

The mass media was a significant source of information about nursing. Kohler and Edwards (1990), surveyed 306 high school students in three public high schools on their perceptions of nursing as a career choice. In this study students were also asked their primary source of information about nursing. Results showed that direct encounters with nurses (33.9%) and watching television (29.49%) were found to be more influential in shaping their opinions than through printed media. Of special significance was that only 2.7% of the subjects said their views came from learning about nursing in school. In the study of Barkley and Kohler (1992), 126 male high school students were surveyed on their beliefs about nursing and their primary source of information about nursing. Subjects’ responses were fairly evenly divided among three of the five available sources: television; reading; school based learning; knowing a nurse and observing a nurse.

The directions in the literature were clear in terms of the major factors influencing choice of career from several overseas studies, and the three categories socio-demographic factors; students’ perception of nursing as a career and; other factors influencing the students’ career choice, were evident in the literature. However, Hong Kong culture has its roots in confucianism, and while there is a sense of ‘east meets west’, the English colonial influence has dominated health care and nursing education and it is time to compare the international literature, trends and directions to local needs. The main questions then, are Hong Kong school students influenced by similar socio-demographic factors, perceptions and family, professional and media influences, as their western counterparts?, or does living in Hong Kong result in different influencing factors. If so, the data produced will add weight to culturally valid nursing education directions. In view of the lack of research in Hong Kong and the cultural uniqueness of the schools and the students, it was decided to develop a new instrument, based on the literature but with local validity.

5. Methodology

Because data concerning this topic locally were sparse and the size of the target population was large (number of form six (F.6) students in Hong Kong at 1998 was 29,453), it was decided that a descriptive survey study would be conducted.

Data collection was conducted by means of a newly developed, self-administered pen and paper questionnaire, the nursing career questionnaire (NCQ). The NCQ was carefully constructed by following a 3-phase process of instrument development (Dunning and Martin, 1996). After a panel of experts tested the content validity, a pilot study was conducted to test for face validity, test–retest reliability and sensitivity of the sample. The main survey was aimed at all 2080 F.6 students studying at the day grammar secondary schools of the Kwan Tong region of Hong Kong. A region which is representative of the 17 school districts in Hong Kong. Although form seven (F.7) is the final year of school, those in F.6 were chosen because that is the year when they actively participate in career activities and start to make their choices, while those in F.7 are more focussed on exam performance.

A review of related literature ensured that an appropriate, reliable and valid instrument did not exist in Hong Kong. Based on an extensive literature review and personal experience in Hong Kong, the NCQ was constructed to measure three content areas: (1) demographic variables; (2) a scale of perception of nursing as a career (PNC) related to career choice (11 items on a four point Likert scale), and (3) other influencing factors. The dependent variables interest in nursing (one ten point Likert scale) and factors related to career choice (five items on a four point Likert scale) were measured as well.

6. Data collection

A pilot study was conducted with 27 similar students in two different schools in a different region. Test–retest results at one month were satisfactory ($p = 0.0005$ and 0.0005, $r = 0.77$ and 0.82, respectively) and the measures of internal consistency Cronbach’s alpha, were 0.73 and 0.78. After appropriate institutional and ethical clearance, 1326 questionnaires were distributed via career teachers at the schools and a total of 1246 students were surveyed. The response rate was 93.9%.
7. Results

The survey respondents ranged in age from 17 to 21, with a mean age of 17.7 (SD = 0.78). There were 604 (48.6%) males, 639 (51.4%) females. There were three groupings of those who studied biology: group one included 259 (21.5%) students who studied Biology both at F.5 and A-level; group two, 405 (33.7%) students who studied Biology only at F.5; the third group, included 538 (44.8%) students who did not study Biology at F.5 or A-level and were the Arts stream group.

In response to the question, ‘Would you consider nursing as a career possibility?’, 28% answered yes, while the 10-point scale item, ‘your interest in nursing’ resulted in 110 (8.9%) students who expressed high interest in nursing (point 8–10); 615 (50%) students expressed moderate interest in nursing (point 4–7); and 505 (41.1%) students expressed low interest (point 1–3).

The majority of parents of respondents were primary school graduates. Concerning fathers’ education, 43.6% (n = 531) were primary school graduates’ 19.5% (n = 237) F.3 graduates, 23.4% (n = 285) secondary school graduates, 5.7% (n = 69) and 2.5% (n = 31) were college and university graduates, respectively. Concerning mother’s education, 50.9% (n = 617) were primary graduates, 18.3% (n = 222) F.3 graduates, 20.9% (n = 253) secondary students graduates, 3.1% (n = 37) and 1.1% (n = 13) were college and university graduates, respectively.

The four most commonly stated groups of fathers’ occupation were elementary occupations (n = 384, 36.6%), plant and machine operators and assemblers (n = 176, 16.7%), Managers and administrators (n = 196, 18.2%) and service workers (n = 123, 11.7%).

For mother’s occupation, apart from 645 (59.9%) respondents’ mother who stated they were housewives, the four highest groups of mother’s occupation were elementary occupations (n = 196, 18.2%), clerks (n = 74, 6.9%) and associate professionals (n = 22, 2%).

The top eleven ideal careers listed by respondents were teacher (15.8%), engineer (13.5%), manager and businessmen (9.8%), doctors (8.4%), accountant (7.1%), policeman and fireman (5%), nurse (4.6%), designer (4.3%), journalist (2.2%), social workers (2.1%) and lawyer (2.1%).

8. Factors important in students’ career choice

Respondents were asked to rank in order seven ‘things that people think are important about choosing a job’. It was found that the most important characteristic was ‘doing what they enjoy’, followed by ‘monthly salary after training’, ‘years of training’, ‘status of the job’, ‘cost of training’, ‘power’ and ‘being paid during training’.

Students were also asked the main source of information that helped them learn about the profession of nursing. Almost half (n = 528) of the respondents indicated that the main source of information that help them in learning about the nursing profession was the mass media and one quarter (n = 291) considered career days/hospital visits.

9. Differences in socio-demographic characteristics of students who choose nursing

In response to research question one: ‘What are the differences in socio-demographic characteristics of Form 6 students who choose nursing as career and those who do not?’, Chi-square tests were used to compare difference between students’ intention to study nursing and the socio-demographic variables: gender, biology study, course grade points in HKCEE (Hong Kong Certificate of Early Education), family income, parents’ education, and parents’ occupation (see Table 1).

There was a statistically significant association between: gender and intention to study nursing (p < 0.0005), with female being associated with a higher interest in nursing as a career; between biology study and intention to study nursing (p < 0.0005); and between student course grade point (CGP) in the form 5, HK Certificate of Education Exam (HKCEE), and intention to study nursing.

Although there was only a weak association between family income and intention to study nursing, the ratios of the students who considered nursing in each family income group decreased as the family income increased. However, it was found that, among the students who considered nursing, the majority of students (72%) were in the low-income group, 25.8% in the middle income group, and only 2.2% in the high income group.

Table 1

| Socio-demographic variables by students’ intention to study nursing |
|-----------------------|-----------------|------------|------------|
| Independent variables | χ²             | df         | p-Value    |
| Gender                | 42.716         | 1          | < 0.0005   |
| Biology study         | 18.942         | 2          | < 0.0005   |
| CGP in HKCEE          | 34.328         | 3          | < 0.0005   |
| Family income         | 5.872          | 2          | 0.053      |
| Fathers’ education    | 3.199          | 5          | 0.669      |
| Mothers’ education    | 3.495          | 5          | 0.624      |
| Fathers’ occupation   | 11.220         | 9          | 0.261      |
| Mothers’ occupation   | 21.079         | 9          | 0.012      |
Consideration of a nursing career was significantly influenced by mother’s occupation \((p < 0.012)\). Father’s occupation \((p = 0.261)\), however, was found to have no significant effect on students’ consideration of a nursing career.

10. Perception of nursing as a career

Results related to the second research question: ‘What are the perceptions of nursing as a career that the A-level school students held that related to their career choice?’ were analyzed using descriptive and inferential statistics. The highest positive response (indicated by responses to either ‘agree’ or ‘strongly agree’ on the scale) was item 7, \((n = 835, 67.39\%)\) where students thought one could make a good salary as a nurse (Table 2). The second highest positive response was item 3, \((n = 834, 67.26\%)\) where students indicated that they were willing to work with sick people. The third highest positive response was item 1 \((n = 777, 62.71\%)\) where students indicated that they would not mind working in a hospital as a nurse.

By contrast, the highest negative response (disagree and strongly disagree) obtained was for item 5, in which 799 (65.07\%) students perceived that the University Bachelor Nursing Program was too expensive. Item 6 which also examined financial aspects revealed that 745 (60.18\%) students indicated that being paid when studying a nursing course in hospital is more desirable. The second highest negative response was for Item 4, in which 740 (60.02\%) students perceived that the nursing programs were too difficult to study.

Given the pervasive image in the past of nursing as semi-profession, it was interesting that 496 (40.19\%) of students perceived nursing has relatively more status than other jobs. Almost half (40.81\%) of students thought that nursing is primarily for women.

11. Perception of nursing as a career

After obtaining descriptive statistics for each item, a total perception of nursing as a career (PNC) Score was calculated for each subject, with negative variables (Item 4, 5, 9) recoded, by adding all the points from the responses to the 11 items. The highest possible total PNC score was 44, indicating the most positive attitude respondents toward nursing as a career, while the lowest possible score was 11, signifying a strong negative attitude. The mean total perception score of the sample were 28.27, with a standard deviation of 3.22.

11.1. Relationships between students’ PNC and intention to study nursing

To answer the second research question, ‘what perceptions of nursing as a career do the students have?’, a comparison was made between the perceptions of students who had chosen nursing and those who had not. There was a significant difference \((p < 0.0005)\) between PNC scores and whether the student had considered nursing as a career (Table 3). Those who had considered a nursing career had a higher PNC score \((M = 30.16)\) than those who had not \((M = 27.53)\).

The relationships between the students’ total PNC and a number of socio-demographic variables were explored. These variables included: gender, biology study, CGP, family income, parents’ education, parents’ occupation. Findings were significant for only two of the demographic variables: Gender \((p < 0.0005)\) and biology study \((p = 0.03)\). (Table 4) Female students had higher PNC scores (28.7) than male (27.8). These differences in perception between males and females may help to account for the small number of males in contrast to females who choose nursing.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Frequency tabulation of students' perception of nursing as a career</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Totally agree/agree</td>
</tr>
<tr>
<td></td>
<td>Count</td>
</tr>
<tr>
<td>1.</td>
<td>Willing to work in a hospital as a nurse</td>
</tr>
<tr>
<td>2.</td>
<td>Willing to work irregular time</td>
</tr>
<tr>
<td>3.</td>
<td>Willing to work with sick</td>
</tr>
<tr>
<td>4.</td>
<td>Perceived difficulty of studying nursing program</td>
</tr>
<tr>
<td>5.</td>
<td>Cost in University program is too expensive</td>
</tr>
<tr>
<td>6.</td>
<td>Being paid when studying is more desirable</td>
</tr>
<tr>
<td>7.</td>
<td>Make a good salary with a nurse</td>
</tr>
<tr>
<td>8.</td>
<td>Many jobs available within nursing</td>
</tr>
<tr>
<td>9.</td>
<td>Choose nursing if not enough marks for another career</td>
</tr>
<tr>
<td>10.</td>
<td>Nursing has more status</td>
</tr>
<tr>
<td>11.</td>
<td>Nursing is primarily for women</td>
</tr>
</tbody>
</table>
Post hoc Bonferroni test showed that there is significant mean difference ($p = 0.038$) between the group studying biology at F.5 and A-level and the group studying biology at F.5 only. Those students who studied a biology subject at F.5 and A-level had higher total perception scores than those who studied at F.5 only and the Arts based students. This supports the previous findings that more females and students who studied biology at F.5 and A-level considered nursing as their career.

To determine the relationship between social influence and nurse role model on students’ PNC and those without the social influence and role model, $t$-tests were utilized. Those students whose close relatives were nurses ($M = 28.8$) or mother a nurse ($M = 30.17$) possessed a significantly higher score on perception as nursing as a career ($p = 0.005$) (Table 5).

To determine if students’ experience influenced their PNC, it was found that those students who participated in career activities ($p < 0.0005$) and got the work experience in a hospital ($p < 0.0005$) had a significantly higher score on PNC ($p = 0.005$) (Table 6). However, it was found that exposure to being a patient, visitor to hospital and mass media did not significantly affect students’ perception of nursing as a career.

### 12. Factors influencing students’ career choice

Results related to the research question: ‘What were other factors influencing students’ career choice?’ were analyzed in two ways using descriptive statistics and Chi square tests to explore the differences between influencing factors and students’ career choice within nursing.

About two-thirds of the respondents ($n = 859, 69.5\%$) agreed that their parents had a positive influence on their career choice. Work experiences in a hospital were also important influencing factors on their career choice ($n = 843, 67.3\%$). The influence from career teachers ($n = 752, 60.8\%$) and friends ($n = 775, 62.2\%$) were
relatively less as compared with parents’ influence. The influence of participation in career activities \((n = 718, 58.0\%)\) and mass media \((n = 704, 56.8\%)\) were considered significant as more than half of the respondents indicated they had positive influence on their career choices.

The effect of parents’ \((\chi^2 = 11.53, p = 0.001)\), career teachers’ \((\chi^2 = 5.52, p = 0.019)\) and friends’ \((\chi^2 = 4.83, p = 0.028)\) influences were found to be significantly related to students’ consideration of nursing as a career.

It is found that those students who participated in career activities \((\chi^2 = 84.48, p < 0.0005)\) and had work experience in a hospital \((\chi^2 = 31.74, p < 0.0005)\) demonstrated a statistically significant association with their intention to study nursing. However, there was no statistically significant association between students’ consideration of nursing as a career and being a patient \((\chi^2 = 0.25, p = 0.619)\), a visitor \((\chi^2 = 0.82, p = 0.365)\), and the influence of mass media \((\chi^2 = 2.18, p = 0.14)\).

### 13. Predictors of intention to study nursing

Backward elimination logistic regression analyses were used to identify socio-demographic and other predictors which explained students’ intention to study nursing. The usefulness of using logistic regression analysis by the backward stepwise elimination methods is its ability to identify significant predictors of students’ intention to study nursing while controlling the possible confounding effects of the independent variables included in the model.

The independent variables that were examined in this test were gender; biology study; course grade point (CGP); parents’ education; parents’ occupation; family income; PNC scores; influence of parents, peers, teachers, role models; experience of patients, and visitors to hospitals. A \(p\)-value of 0.2 was the criterion that was used for these variables to be included in the model.

Of the 1246 questionnaires, only 831 with completed data were analyzed. Of these responses, there were 28% respondents reported that they intended to study nursing. After adjusting for all variables in the model, five variables among these students which were associated with the intention to study nursing were identified: female \((p < 0.0005)\), biology study at F.5 and A-level \((p < 0.0005)\), CGP \((p < 0.0005)\), PNC scores \((p < 0.0005)\), and participation in career activities \((p < 0.0005)\) were found to be predictors of the intention to studying nursing among these students.

### 14. Conclusion

What are the factors that influence school students to consider nursing as their career? In this sample of F.6 students in Hong Kong, it was socio-demographic factors, perception of nursing as a career, influence of significant people, and past experiences with nurses (either knowing a nurse personally, visit to hospital or through nursing career activities). The findings of this study concurred with several other studies yet differed from others. This may be attributable to sample size and heterogeneity, differing instruments and associated reliability and validity. Nevertheless, the data from this sample represents a profile of a homogenous sample of Hong Kong Chinese and adds useful baseline data for use in recruitment, education and further research in Hong Kong.

Contrary to the findings of previous studies, parent’s education, father’s occupation and family incomes were not found to be predictors of intention which, in this sample, challenges the findings that students who study nursing come from a low socioeconomic background (May et al., 1991), and the higher the parent’s education the more negative the attitude (Lerner, 1991). Personal interactions with nurses were found to influence choice of nursing by Steven and Walker (1993) but this study found that knowing a nurse personally was significantly associated with a positive perception of nursing but not choosing nursing as a career and this was supported by Kohler and Edwards (1990). This study also differed
from that of Barkley and Kohler (1992), with perception of nursing as a career significantly associated with choice of nursing, and supported the findings of Grossman and Northrop (1993). The desire to care for others was congruent with other studies (Boughn, 1994; Smadu, 1996; Williams et al., 1991), and the negative perceptions of nursing were similar (Kohler and Edwards, 1990).

This study found that males have equally positive attitudes to nursing and this differed to the findings of May et al. (1991). Of note was the finding that neither parents, career teachers nor friends demonstrated a significant influence on student’s perception of nursing as a career, except in the case where a mother or close relative was a nurse (Kohler and Edwards, 1990). There was a higher proportion of students in this study (28%) who considered nursing as a career but gender, biology study, previous academic achievement and mother’s occupation affected students’ intention. These findings were supported by Grossman and Northrop (1993) and Tang et al. (1998).

In summary, predictors of the high potential group are female students who study a biology subject at F.5 and A-level, possess a positive perception of nursing, a good CGP in the HKCEE, and experience of participation in career activities. These F.6 students had generally positive opinions of nursing. The majority perceived nursing as a career that provides opportunity to care for people and is a financially rewarding career with job security. Students who choose nursing do so because of a desire for a profession with job security where they can care for people and capitalize on their interest in science. Negative perceptions held by more than 50% of students related to the lower status of the nursing profession, the high cost of nursing programs in University, difficulty of the study program and perceived female-orientation occupation of nursing.

The attraction to nursing because of its reputation as a ‘caring’ profession should be exploited in the recruitment process. More importantly, these qualities must be articulated in the design of nursing roles. Career choice also hinged on practical considerations such as the job security and salary. Because recruitment into nursing is influenced by multiple factors, it is likely that nursing could benefit from establishing more formal linkages between employers, educators, and the public. Many students still were self-selected into the profession through their personal motivation and/or informal family supports.

Based on this study, recruitment efforts should focus on increasing awareness of positive attributes of the nursing career such as career opportunities; marketing the personal satisfaction, employment opportunities, and income potential of the nursing career; and actively targeting potential students who view the nursing career more positively. Efforts should be made to actively compete for male students and students who view other professions as more desirable. Strategies should be incorporated to include successful male roles and use of recruitment materials that highlight the male students and alumni groups. The marketing emphasis should shift, and focus more directly on school career teachers and students’ families. It is suggested that nurse students and alumni be actively involved in recruitment efforts. Hands-on demonstrations and ‘up-close’ approaches are recommended to keep recruitment strategies lively and personal from the potential students’ perspective.

Finally, further studies to examine opinions and knowledge of school career masters and parents over the next few years are needed to assess the long-term effects of these recruitment efforts.

References


